AMENDMENTS IN THE SPECIFICATION

Please remove paragraph number [0043] and replace it with the following rewritten paragraph:

[0043] When data (scan data) is not scanned out as described above, data (process data) is pushed through and processed by processing units **505**. Data is passed from latches **304** to processing units **505** and/or from one processing unit **505** to another processing unit **505** and/or from on latch **304** to another latch **304**. The movement of process data through latches **304** and processing units **505** is under the control of a process controller [[512]] <u>514</u> , shown in **Figure 5c**. Note that while, for purposes of illustrative clarity, connections and data flow are shown as being vertical for process data and horizontal for scan data, it is to be understood that scan and/or process data is able to move between latches **304** and/or processing units **505** in any direction that other connections (not shown) to latches **304** and processing units **505** allow.

Please remove paragraph number [0045] and replace it with the following rewritten paragraph:

[0045] Referring now to **Figure 5c**, there is depicted a block diagram of the preferred embodiment of the present invention. A scan controller **510**, incorporating timing circuit **400**, is coupled to elements matrix **500** to control the movement of scan data out of scan latches in elements matrix **500** as described in detail above. Also coupled to elements matrix **500** is a process controller [[512]] <u>514</u> , which coordinates the processing of data by and through elements matrix **500**. That is, process controller coordinates the processing and movement of data through the processing elements in elements matrix **500**. Process controller [[512]] <u>514</u> moves process data into and out of specified processing elements in a coordinated manner according to the architecture of elements matrix **500**.

Please remove paragraph number [0046] and replace it with the following rewritten paragraph:

[0046] Since concurrent control of elements matrix **500** by scan controller **510** and process controller [[512]] <u>514</u> would result in havoc, controller coordinator **512** coordinates the mutually exclusive operation of scan controller **510** and process controller [[512]] <u>514</u>. That is, during normal process operations involving elements matrix **500**, controller coordinator **512** enables process controller [[512]] <u>514</u> while concurrently disabling scan controller **510**. While scan controller **510** is disabled, process data is processed by the processing elements **505** in elements

matrix **500** in a normal fashion. Alternately, when controller coordinator **512** disables process controller [[**512**]] **514** and enables scan controller **510**, process data no longer passes through processing elements **505**, and the data in scan latches **304** is scanned out under the control of scan controller **510**.

Please remove paragraph number [0047] and replace it with the following rewritten paragraph:

[0047] The present invention, as described in its preferred embodiment, is thus able to scan data out of a latch array, such as state holding elements matrix **500**, without the need for slave latches for every latch being scanned. Thus, a smaller number of overhead ~~latched needed are now~~ latches are now needed within the state holding elements matrix **500**. The present invention further affords a single elements matrix to have separate and distinct controllers, one for processing data and one for scanning out inter-process data between processing units **505**.

AMENDMENTS IN THE DRAWINGS

Please amend **Figure 5c** to include the reference number **514**, as shown in the attached formal drawings. No new matter has been added.